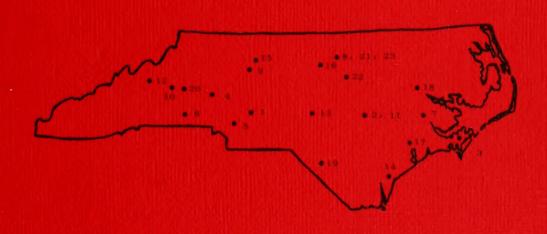
TI 1:021 1972

DIVISION OF HEALTH SERVICES DOOD, BEING

RALEIGH, NORTH CAROLINA 27602 1 5 1057

NORTH CAROLINA CANCER REGISTRY ANNUAL REPORT 1972



PARTICIPATING CANCER PROGRAMS

CABARRUS MEMORIAL HOSPITAL		MOORE MEMORIAL HOSPITAL	1.3
CAPE FEAR VALLEY HOSPITAL	2	NEW HANOVER MEMORIAL HOSPITAL	14
CARTERET GENERAL HOSPITAL	3	A. C. BAPTIST HOSPITAL	1.5
CATAWBA MEMORIAL HOSPITAL	ų,	N. C. MEMORIAL HOSPITAL	1.6
CHARLOTTE MEMORIAL HOSPITAL	5	ONSLOW MEMORIAL HOSPITAL	1.7
CLEVELAND MEMORIAL HOSPITAL	6	PITT COUNTY MEMORIAL HOSPITAL	1.8
CRAVEN COUNTY MEMORIAL HOSPITAL	7	SOUTHEASTERN GENERAL HOSPITAL	1.9
DUKE HOSPITAL	8	VALDESE GENERAL HOSPITAL	20
FORSYTH MEMORIAL HOSPITAL	9	VETERANS ADMINISTRATION HOSPITAL	2.1
GRACE HOSPITAL	10	WAKE COUNTY MEMORIAL HOSPITAL	2.2
HIGHSMITH-RAINEY HOSPITAL		WATTS HOSPITAL	23



NORTH CAROLINA CANCER REGISTRY ANNUAL REPORT 1972

JAMES S. McCORMICK, JR., M.P.H. - PROGRAM MANAGER

JOHN E. ALLEN - COMPUTER SYSTEMS ANALYST

EDNA P. RAYNOR - ADMINISTRATIVE ASSISTANT

JESSIE S. PATE - STATISTICAL ASSISTANT

DIANNE PACE - SECRETARY

BRENDA CRAIG - SECRETARY



NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES

DIVISION OF HEALTH SERVICES

CHRONIC DISEASE BRANCH Isa C. Grant, M.D., M.P.H., Head Post Office Box 2091

PUBLIC HEALTH STATISTICS BRANCH James Palmersheim, Ph.D., Head Raleigh, North Carolina 27602

CANCER REGISTRY ABSTRACT Division of Health Services P.O. Box 2091. Raleigh. N. C. 27602

		2091, Rale	eigh, N. C.							
	Last First	Mtddle	1 3	aiden	S	ocial Security Numb	er			
	Street No./RFD City ADDRESS:	Cou	nty	State	В	ospital File Number				
PATIENT	PLACE OF County State BIRTH:	DATE OF BIRTH:	Month	Day	Year N	ame of Hospital				
PAT	ACC. DACC.	Orner		emale	STATUS OF MENOPAUSE:	□ 1-premenopau □ 2-postmenopa				
	EDUCATION: (circle highest grade completed)	elemen	tary 1 5 6 7 8		igh school 2 3 4	college I 2 3 4 or	5+			
	DATE OF ADMISSION:	Year	DATE OF DISCHARGE	Month	E	Эву ү	car			
٧ ٨	HOW LONG HAS PATIENT no. of months		□ no s □ unkn							
HISTORY	WAS THIS CANCER POSITIVELY)-No If	yes, specify	where and	date					
Ξ	HAS PATIENT BEEN PREVIOUSLY)-No If	Yes, specify	where and	date					
	DIAGNOSIS ON DISCHARGE:					Date of Initial E)i ago			
						Diagnosis Code	(1C			
S	STAGE OF DISEASE: I-in situ 2-locally invasion		3-regional n		□ 5-d	iffuse disease				
S	BASIS OF DIAGNOSIS: ☐ I-gross autopsy ☐ 2-histology	linical & other								
DIAGNO	HISTOLOGICAL DIAGNOSIS:									
	EXFOLIATIVE CYTOLOGY:					Cytology Code				
	DATE TREATMENT, DESCRIBE:			DATE						
EN T	□ Surgery (All procedures, including	g biopsy)			□ Chemotherapy					
TREATMEN					□ Steroid/Horm	none				
0 F	☐ Pre-Operative Radiation				□ Other					
COURSE	The operative madration									
00	□ Post-Operative Radiation				□ No Treatment	(specify reason)				
					□ Patient Refu	ısed				
DISCHARGE	☐ I-no evidence PATIENT ALIVE: ☐ 2-not free of		PATIENT	DEAD:		al cancer , cancer present , free of cancer				
DISC	IF DEAD, DATE:	Year	AUTOPSY	,	□ 0-no □ I-yes	□ 9-unknown	-			

Name of per Form 1-01 DHS Form 1064 Rev. 3/71 Chronic Disease

Name of person submitting report

In 1973 the North Carolina Cancer Registry entered into its fifth year of existence. Currently, there are over 22,000 cases which have been accessed to the Cancer Registry from the 23 participating local hospital cancer registries.

The goal of the Cancer Registry is to assist its participating hospitals in developing cancer programs which will effectively utilize the cancer patient statistical data as a part of a continuing education program for the medical and paramedical personnel who care for cancer patients. Implementation of local cancer registries is one step toward the development of a strong cancer program. The Cancer Registry assists in this development by offering expert advice to local hospital personnel on the record systems and the abstracting and coding knowledge needed to support an effective local cancer registry. Local hospital registries are autonomous except that common abstract and yearly follow-up report forms are submitted to the Cancer Registry.

In addition to the publication of the Annual Report and other selected data, the Registry sponsors a yearly Cancer Registry Symposium. Liaison physicians and cancer registrars from all the local cancer registries in North Carolina are invited to attend. During the 1972 Symposium experts were invited to speak on specific cancer sites, panel discussions at which participants reviewed the cancer programs at their hospitals were presented, and an abstracting and follow-up workshop was held. Each year the format of the Symposium varies. The format is planned based on input from the local cancer registrars and liaison physicians.

The Cancer Registry lists as one of its priorities the prompt production of any special request from participating hospitals for cancer patient data. Requests from individual hospitals to the Cancer Registry are for data on the individual hospital's cancer experience or comparing that hospital to others of the same size in the state or a comparison to the state as a whole. Members of the Executive Committee to the Registry also participate in a speakers' bureau whose services can be requested by participating cancer registry hospitals or those interested in becoming participants.

This year the 1972 Annual Report is composed of three sections. The first section is an analysis of the leading primary sites reported to the North Carolina Cancer Registry. The second section contains a yearly table and a cumulative table showing the total registry experience. The third section, which is available to participating hospitals only, is composed of yearly and cumulative individual hospital tables.

Two Committees exist to provide the staff of the North Carolina Cancer Registry with expert advice and guidance.

A five member Executive Committee provides medical and statistical consultation on the Cancer experience in North Carolina. A larger Advisory Committee is composed of the liaison physician from each of the participating local hospital cancer registries. Input from this Committee enables the Cancer Registry to be more responsive to local needs.

EXECUTIVE COMMITTEE

Joseph A. Buckwalter, M.D., Chairman John A. Brabson, M.D. Gary G. Koch, Ph.D. James F. Newsome, M.D. William M. O'Fallon, Ph.D. Charles L. Spurr, M.D.

ADVISORY COMMITTEE (LIAISON PHYSICIANS) AND LOCAL CANCER REGISTRARS

Cabarrus Memorial Hospital J. O. Williams, M.D. Mrs. June Panzer

Carteret General Hospital Charles P. Nicholson, M.D. Mrs. Joyce Collins

Catawba Memorial Hospital Thomas W. Brooks, M.D. Mrs. Brenda Martin

Charlotte Memorial Hospital Harold Hamit, M.D. Mrs. Ruth Boaz

Cleveland Memorial Hospital Avery McMurry, M.D. Mrs. Mary Frances Elliott

Craven County Hospital James N. Blackerby, M.D. Mrs. Doris Garner

Cumberland County Hospital Authority Charles Wells, M.D. Mrs. Betty Lou Whitman

Duke Hospital Saleh A. Fetouh, M.D. Mrs. Lou Woods

Edgecombe General Hospital James M. Kelsh, M.D. Mrs. Linda Ward

Forsyth Memorial Hospital Thomas N. Lide, M.D. Mrs. Wanda Manuel

Grace Hospital, Inc. John Giles, M.D. Mrs. Nelma Kennedy

Mrs. Nelma Kennedy

Memorial Mission Hospital

Harry H. Summerlin, Jr., M.D. Mrs. Ellita Ward Moore Memorial Hospital Charles A. Phillips, M.D. Miss Carol Thrower

New Hanover Memorial Hospital Lockert Mason, M.D. Mrs. Katherine Watts

N. C. Baptist Hospital Charles L. Spurr, M.D. Mrs. Brenda Hippert

N. C. Memorial Hospital James F. Newsome, M.D. Miss Jean Weaver

Onslow Memorial Hospital Charles Streeter, M.D. Mrs. Del Murphy

Pitt County Memorial Hospital Howard Gradis, M.D. Mrs. Pattye Brown

Southeastern General Hospital Bob B. Andrews, M.D. Mrs. Betty Hall

Valdese General Hospital E. R. White, M.D. Mrs. Sarah Hedrick

V. A. Hospital R. W. Postlethwait, M.D. Mrs. Betty Howell

Wake County Memorial Hospital Laurin J. Kaasa, M.D. Mrs. Margaret Pipkin

Watts Hospital James Davis, M.D. Mrs. Blanche Sellars

SECTION I

LEADING PRIMARY SITES



INTRODUCTION TO THE NORTH CAROLINA CANCER REGISTRY REPORT ON LEADING PRIMARY SITES 1968 - 1972

On the following pages the North Carolina Cancer Registry gives an overview of the leading primary sites reported during the years 1968-1972.

Presented first are the twelve leading primary sites accumulated in the Registry from its beginning in 1968 through 1972 and a comparison with the twelve leading primary sites in 1972.

Next the North Carolina Cancer Registry reports on five selected primary sites which represent those sites most frequently reported in North Carolina. The discussions accompanying the graphs on each of these primary sites were written by Joseph A. Buckwalter, M.D., Chairman of the Executive Committee to the North Carolina Cancer Registry.

In each primary site discussion there are comparisons made with data from the National Cancer Institute's End Results in Cancer, Report
No. 4 which is a compilation of data collected by six hospital registries and three statewide registries (1). When evaluating the differences between North Carolina data and End Results data the following points should be kept in mind.

- 1. North Carolina Cancer Registry data came from 23 North Carolina Hospitals and the End Results data from more than 100 hospitals located in nine states. End Results cases were accessed from 1955 thru 1964 and North Carolina cases beginning in 1968.
- 2. Differences in criteria used in case abstracting, staging and classification of treatment affect the findings and therefore may be responsible for some of the differences in these findings.
- 3. All End Results patients were white while the North Carolina patients were multiracial, chiefly white and black.
- 4. The same method was used to compute relative survival of North Carolina and End Results patients (2, 3, 4).

Requests for more specific data relating to the following site presentations or for comparable data on other primary sites are encouraged.

TWELVE LEADING PRIMARY SITES IN THE NORTH CAROLINA CANCER REGISTRY

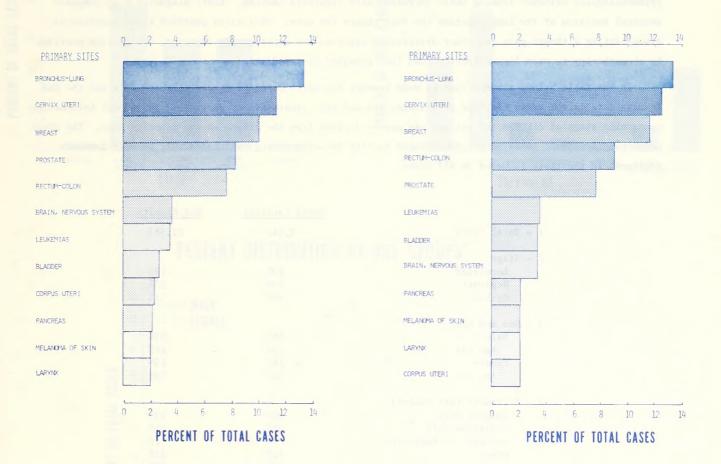
The graphs on the opposite page depict the twelve leading primary sites of cancer reported to the North Carolina Cancer Registry from 1968 through 1972 and the twelve leading sites reported for 1972 alone.

The five leading primary sites for the five-year period, 1968 through 1972, were Bronchus-Lung, Cervix Uteri, Breast, Prostate and Rectum-Colon. The percentages that each of these sites comprises of the total North Carolina cases range from 13.2% for the Bronchus-Lung to 7.7% for the Rectum-Colon. The North Carolina statistics may be compared to statistics from the National Cancer Institute's Preliminary Report, Third National Cancer Survey, 1969 Incidence (5). This survey compiled cancer data reported from ten selected areas in the United States. The five leading sites, in order, from the national survey were the Rectum-Colon, Breast, Bronchus-Lung, Cervix Uteri and Prostate with percentage of total cases ranging from 14% to 7.4%. When comparing North Carolina Cancer Registry figures to those of the Third National Cancer Survey, it is important to note that the figures have not been adjusted to compensate for population differences between the national sampling areas and North Carolina.

LEADING PRIMARY SITES REPORTED TO NORTH CAROLINA CANCER REGISTRY

1968 - 1972

1972



Cancer of the lung is one of the most lethal of all neoplasms. The American Cancer Society estimates that during 1973 there will be 79,000 new cases and 72,000 deaths due to cancer of the lung in the United States (6). During 1972, 1,443 North Carolina residents died from this neoplasm (7). More than 50% of all patients diagnosed with lung cancer are inoperable when first seen. Of those operated upon, another 50% (25% of the original group) are unresectable. From the time of diagnosis the average overall survival is 6-9 months with only 20% of patients with this neoplasm surviving more than one year. About 5% of patients with cancer of the lung survive five years from diagnosis. (8) Cure is infrequent because bronchogenic carcinoma metastasizes early and because en bloc excision of regional lymph node spread is rarely feasible due to the proximity of vital nonresectable structures in the mediastinum in the pathway of spread of the neoplasm. The incidence of lung cancer, basically a disease of middle age men, is increasing each year. Recently the incidence has increased in women and in younger men. There is strong epidemiological evidence linking these increases with cigarette smoking. Early diagnosis with complete surgical excision of the lung provides the only chance for cure. Palliation provided by irradiation is disappointing although pain and other distressing symptoms are occasionally improved. Palliation provided by chemotherapy is even less effective than that provided by irradiation.

In the table below, a comparison is made between the North Carolina Cancer Registry data and the End Results data in the areas of stage of disease, sex and age, treatment and survival. Additional information concerning stage of disease and sex and age may be derived from the graphs on the opposite page. The graph concerning treatment is based on cases staged locally invasive or regional nodes only whereas data on treatment in the table is based on all cases.

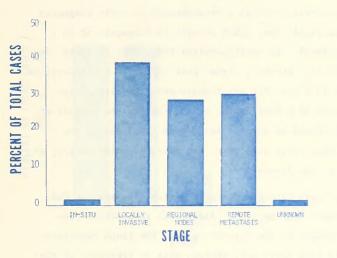
		North Carolina	End Results
1 -	Total Cases	2,942	22,585
2 -	Stage		
	Localized	40%	19%
	Regional	29%	30%
	Distant	30%	51%
3 -	Sex and Age		
0	Male	86%	85%
	Age 65+	33%	41%
	Female	14%	15%
	Age 65+	34%	39%
4 -	Treatment (all stages)		
4	Surgery Only	19%	19%
	Radiation Only	38%	26%
	Surgery and Radiation	6%	4%
	Other	12%	22%
	None	25%	29%
5 -	Five-Year Relative Survival	10%	8%

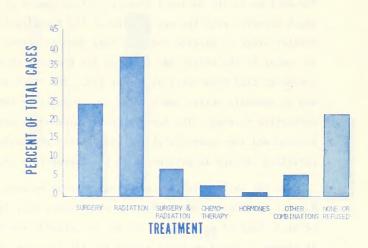
In summary, the findings above suggest that the diagnosis of cancer of the lung is made at an earlier stage of the disease in North Carolina patients. Cancer directed therapy, particularly radiation, is more often used in North Carolina.

BRONCHUS - LUNG

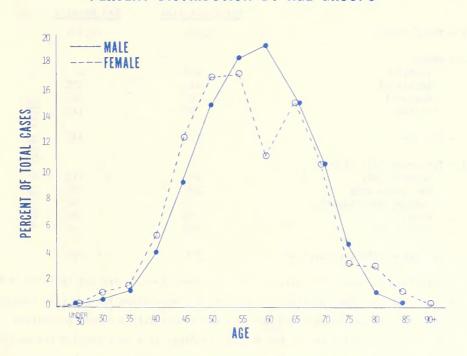
1968 - 1972

PERCENT DISTRIBUTION BY STAGE OF DISEASE* PERCENTAGE OF CASES
BY TYPE OF TREATMENT FOR CASES
STAGED LOCALLY INVASIVE AND REGIONAL NODES*





PERCENT DISTRIBUTION BY AGE GROUPS*



Source: *2,942 UNDUPLICATED CASES OF BRONCHUS-LUNG CANCER ACCESSED TO THE NORTH CAROLINA CANCER REGISTRY FROM THE 23 PARTICIPATING HOSPITALS.

**BASED ON 2,020 CASES.

Cancer of the cervix is the third most common cancer occurring in women. Within this group it represents approximately 15% of all occurring malignancies. (8) The American Cancer Society estimates there will be 46,000 new cases and 12,000 deaths from cancer of the uterus in the United States during 1973. They also estimate 1,200 new cases for North Carolina. (6) There are some interesting facts regarding the incidence of cancer of the cervix. Cervical cancer is $2\frac{1}{2}$ times as common as cancer of the corpus uteri. The incidence is lower in women of Jewish faith. There is evidence that circumcision of the male partner results in a lower incidence. The incidence is higher with early sexual experience and also in the lower social economic strata of the population. There is a positive association between cancer of the cervix and increased parity and the history of venereal disease. There is evidence that a virus, possibly herpes simplex virus, is associated with an increased incidence of carcinoma of the cervix. (8) The decline in the national death rate from cancer of the cervix reflects a breakthrough in early diagnosis which occurred with the application of the Papanicolaou cervical smear which results in diagnosis at an earlier stage of disease and therefore more effective treatment. In North Carolina the number of deaths due to cancer of the cervix has declined for the past three years. During calendar year 1972, 178 North Carolina residents died from cervical cancer (7). The "Pap" smear is a must for all females over 20 years of age and in sexually active women under 20. Surgery or radiation or a combination of the two are the methods of definitive therapy. The decision concerning which method should be used is based upon the stage of the disease and the expertise of the responsible physician. Comparable cure rates are obtained using surgery or radiation therapy in patients with the appropriate stage of the disease.

In the table below, a comparison is made between the North Carolina Cancer Registry data and the End Results data in the areas of stage of disease, age, treatment and survival. Additional information concerning stage of disease and age may be derived from the graphs on the opposite page. The graph concerning treatment is based on cases staged locally invasive or regional nodes only whereas data on treatment in the table is based on all cases.

	North Carolina	End Results
1 - Total Cases	2,594	10,557
2 - Stage In Situ Localized Regional	43% 44% 9%	_ 52% 34%
Distant 3 - Age 55+	4% 27%	14%
4 - Treatment (all stages)	49%	11%
Surgery Only Radiation Only	29%	70%
Surgery and Radiation Other	2% 3%	6% 6%
None	17%	6%
5 - Five-Year Relative Survival	78%	60%

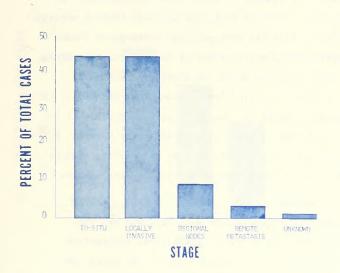
In summary, it is important to know that patients with carcinoma in-situ are not included in the End Results findings. Patients with carcinoma in-situ are younger, are more often treated with surgery than those with a more advanced stage of cancer and have survival comparable with a normal population. The absence of patients with carcinoma in-situ in the End Results findings is a contributing reason for differences in age, method of treatment, and relative survival.

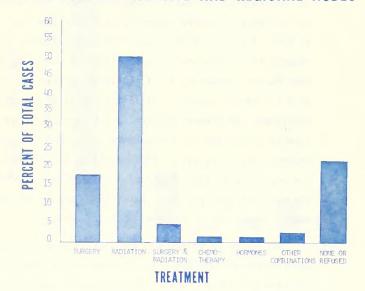
CERVIX UTERI

1968 - 1972

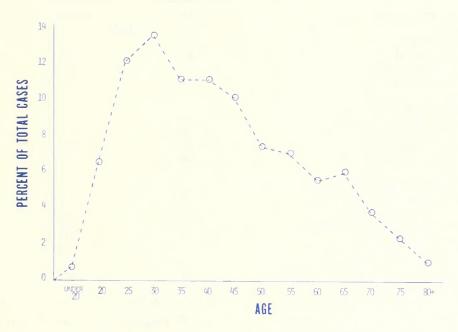
PERCENT DISTRIBUTION BY STAGE OF DISEASE*

PERCENTAGE OF CASES
BY TYPE OF TREATMENT FOR CASES
STAGED LOCALLY INVASIVE AND REGIONAL NODES**





PERCENT DISTRIBUTION BY AGE GROUPS*



Source: *2,594 UNDUPLICATED CASES OF CERVIX UTERI CANCER ACCESSED TO THE NORTH CAROLINA CANCER REGISTRY FROM THE 23 PARTICIPATING HOSPITALS.

**BASED ON 1.359 CASES.

The American Cancer Society estimates that during 1973 there will be in the United States 74,000 new cases of breast cancer and 33,000 deaths (6). During 1972, 648 North Carolina residents died of breast cancer (7). Seven out of every hundred women develop this neoplasm making it the most common cancer occurring in females. Breast cancer is also the leading cause of death due to cancer in women (6,7). Approximately 95% of patients discover the lesion themselves by breast self examination, at which time 60% have cancer which has spread to the axillary nodes. In spite of the vast experience which has been accumulated in the management of patients with cancer of the breast the overall 5 year survival rate has remained disappointingly low for the past 50 years. (8) The best explanation for this discouraging finding is that current methods of diagnosis detect the neoplasms at an advanced stage. Serial section studies of excised breast cancers suggest that by the time the neoplasm is palpable, it has already been present for at least 5 years. Prospective randomized clinical studies using the best equipment and well-trained personnel suggest that thermography is an effective screening technique. Patients with positive thermograms should then have a mammogram, or if available, a more precise sophisticated modification of the latter, a xerogram. In a few cancer centers, clinically occult neoplasms have been detected using the above approach. The continuing controversy concerning the most effective way to treat so-called "early" cancer of the breast is related to the lack of prospective randomized studies although several are now in progress. Because of the unpredictable behavior of this neoplasm, it has been suggested that 10 year rather than 5 year survival rates are necessary to reach meaningful conclusions concerning therapy. The results of some prospective studies suggest that multiple drug chemotherapy should be used early rather than late as a method in the management of recurring or residual breast cancer.

In the table below, a comparison is made between the North Carolina Cancer Registry data and the End Results data in the areas of stage of disease, age, treatment and survival. Additional information concerning stage of disease and age may be derived from the graphs on the opposite page. The graph concerning treatment is based on cases staged locally invasive or regional nodes only whereas data on treatment in the table is based on all cases.

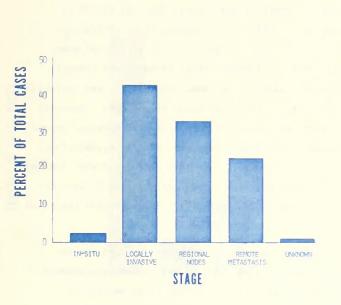
	North Carolina	End Results
1 - Total Cases	2,234	25,698
2 - Stage		
Local	45%	45%
Regional	31%	42%
Distant	24%	13%
3 - Sex and Age		
Male	1%	-
Age 65+	50%	-
Female	99%	100%
Age 65+	29%	37%
4 - Treatment (all stages)		
Surgery Only	52%	57%
Radiation Only	6%	3%
Surgery and Radiation	13%	21%
Other	22%	14%
None	7%	5%
5 - Five-Year Relative Survival	56%	62%

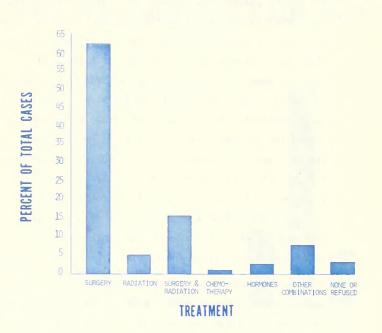
In summary, the findings suggest that a larger percentage of North Carolina patients with breast cancer had distant stage of disease. Consistent with the stage of cancer findings, the End Results data indicate that primary treatment was more often surgery alone or surgery and radiation. No information concerning cancer of the male breast was reported by the End Results registries.

BREAST 1968 - 1972

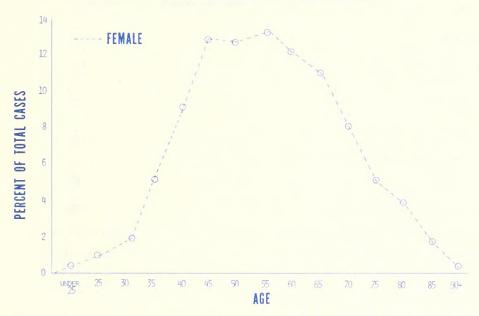
PERCENT DISTRIBUTION BY STAGE OF DISEASE*

PERCENTAGE OF CASES
BY TYPE OF TREATMENT FOR CASES
STAGED LOCALLY INVASIVE AND REGIONAL NODES**





PERCENT DISTRIBUTION BY AGE GROUPS***



Source: "2,234 UNDUPLICATED CASES OF BREAST CANCER ACCESSED TO THE NORTH CAROLINA CANCER REGISTRY FROM THE 23 PARTICIPATING HOSPITALS.

^{**}BASED ON 1.648 CASES.

^{***}Based on 2.208 cases of female Breast cancer.

CANCER OF THE PROSTATE

Cancer of the prostate is the second most common internal malignancy in men. It occurs almost exclusively after 50 years of age with the median age being 70 years. (8) The American Cancer Society estimates that during 1973 there will be 38,000 new cases and 18,000 deaths from cancer of the prostate in the United States (6). During 1972, 418 North Carolina residents died of this neoplasm (7). Prostatic carcinoma follows cancer of the lung and cancer of rectum-colon as a cause of death by malignancy in men (6). Histologic examination of the prostate at autopsy in men over 50 years of age reveals that 14% to 46% of these men have prostatic carcinoma which frequently is asymptomatic (8). Lower urinary tract obstruction with the usual findings and symptoms leads to the diagnosis which is made on the basis of the rectal examination findings confirmed by needle biopsy. Definitive or curative treatment until recently was thought to be restricted to the small percentage of patients in whom the diagnosis was made before there was extension beyond the prostatic capsule. Radical prostatectomy is indicated in this small group of patients. Recently the findings from several clinical studies indicate the patients with more advanced lesions, extension beyond the capsule of the prostate, may be curable with the combination of radiotherapy and radical prostatectomy. Carcinoma of the prostate usually has a slowly progressing clinical course. More than 80% of patients treated with estrogen and/or orchiectomy have an objective remission. Bone metastases frequently disappear and the prostate shrinks. The average survival once metastases are present is 2-3 years (8). Transurethral resection is indicated to relieve lower urinary tract obstruction.

In the table below, a comparison is made between the North Carolina Cancer Registry data and the End Results data in the areas of stage of disease, age, treatment and survival. Additional information concerning stage of disease and age may be derived from the graphs on the opposite page. The graph concerning treatment is based on cases staged locally invasive or regional nodes only whereas data on treatment in the table is based on all cases.

	North Carolina	End Results
1 - Total Cases	1,864	13,790
2 - Stage		
Localized	70%	57%
Regional	9%	14%
Distant	20%	29%
3 - Age 65+	74%	80%
4 - Treatment (all stages)		
Surgery Only	28%	21%
Surgery/Chemotherapy/Hormones	57%	64%
Other	3%	7%
None	12%	8%
5 - Five-Year Relative Survival	57%	51%

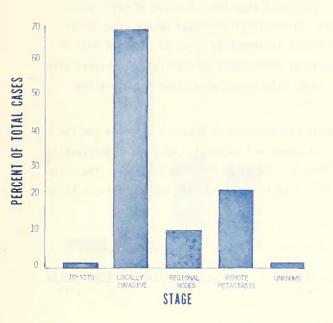
In summary, North Carolina patients with cancer of the prostate were reported as having earlier stage of cancer at diagnosis. Over two thirds of all patients were reported as having localized cancer at diagnosis which is not consistent with the clinical finding which indicates a more advanced disease at diagnosis. Surgery was more often the only method of treatment in North Carolina patients which is consistent with earlier stage of cancer.

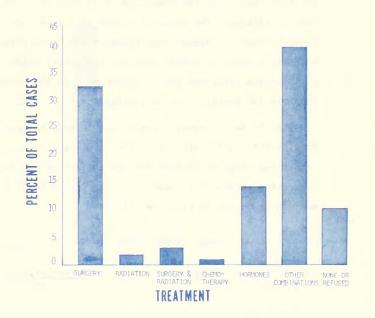
PROSTATE

1968 - 1972

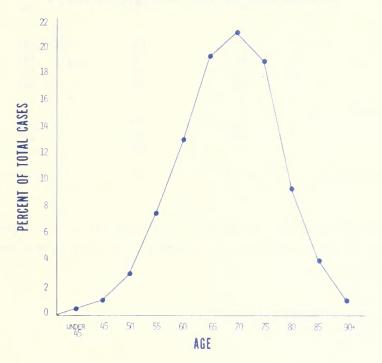
PERCENT DISTRIBUTION BY STAGE OF DISEASE*

PERCENTAGE OF CASES
BY TYPE OF TREATMENT FOR CASES
STAGED LOCALLY INVASIVE AND REGIONAL NODES**





PERCENT DISTRIBUTION BY AGE GROUPS*



Source: *1,864 unduplicated cases of prostate cancer accessed to the North Carolina Cancer Registry from the 23 participating Hospitals.

**BASED ON 1.459.

CANCER OF THE RECTUM - COLON

The American Cancer Society estimates that during 1973 there will be 79,000 new cases of rectum-colon cancer in the United States and 47,000 people will die of this neoplasm (6). During 1972, 732 North Carolina residents died of rectum-colon cancer (7). There is a direct relationship between the incidence of rectum-colon cancer and the affluence and level of industrialization of the population. Since this neoplasm always begins in the mucosa, occult or gross blood in the stools is one of its earliest signs. It has been shown that the hemoccult stool test is a reliable screening method for detection of early asymptomatic lesions. The hemoccult stool test is a more reliable and practical screening method than either sigmoidscopic or colonoscopic examinations. The primary method of treatment is surgical excision with an adequate segment of normal proximal and distal colon. Significant improvement in survival of patients with rectum-colon carcinoma awaits improvement in the techniques which will enable physicians to detect and diagnose the neoplasms at an earlier stage.

In the table below, a comparison is made between the North Carolina Cancer Registry data and the End Results data in the areas of stage of disease, sex and age, treatment and survival. Additional information concerning stage of disease and sex and age may be derived from the graphs on the opposite page. The graph concerning treatment is based on cases staged locally invasive or regional nodes only whereas data on treatment in the table is based on all cases.

	Colon C	ancer	Rectum Ca	ancer
	North Carolina	End Results	North Carolina	End Results
1 - Total Cases	1,078	19,461	651	11,515
2 - Stage				
Localized	52%	41%	54%	45%
Regional	26%	31%	23%	29%
Distant	22%	28%	23%	26%
3 - Sex and Age				
Male	47%	45%	54%	55%
Age 65+	52%	60%	44%	58%
Female	53%	55%	46%	4 5%
Age 65+	56%	59%	52%	57%
4 - Treatment (all stages)				
Surgery Only	74%	77%	62%	72%
Other	11%	6%	20%	7%
None	1 5%	17%	18%	21%
5 - Five-Year Relative Survival	(38%)*	46%	(38%)*	40%

^{*}Rectum-Colon

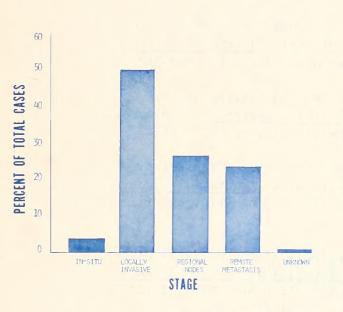
In summary, cancer of the rectum and colon appear to be diagnosed at an earlier stage in North Carolina than at the End Results hospitals. In both groups of hospitals colon cancer is more common in women and rectum cancer is more common in men.

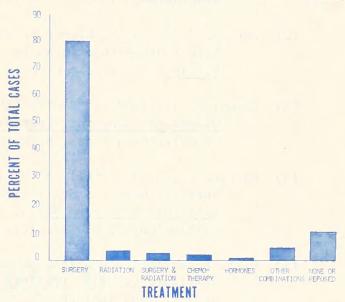
RECTUM - COLON

1968 - 1972

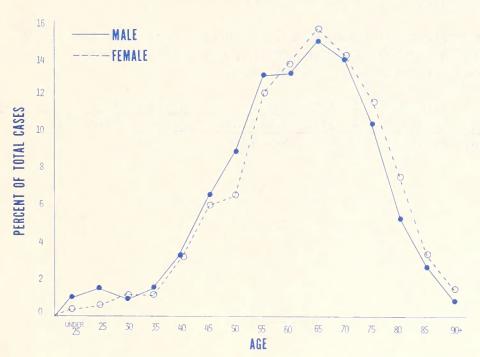
PERCENT DISTRIBUTION BY STAGE OF DISEASE*

PERCENTAGE OF CASES
BY TYPE OF TREATMENT FOR CASES
STAGED LOCALLY INVASIVE AND REGIONAL NODES**





PERCENT DISTRIBUTION BY AGE GROUPS*



Source: *1,729 unouplicated cases of rectum-colon cancer accessed to THE North Carolina Cancer Registry from the 23 participating Hospital.

^{**}Baseo on 1,300 cases.

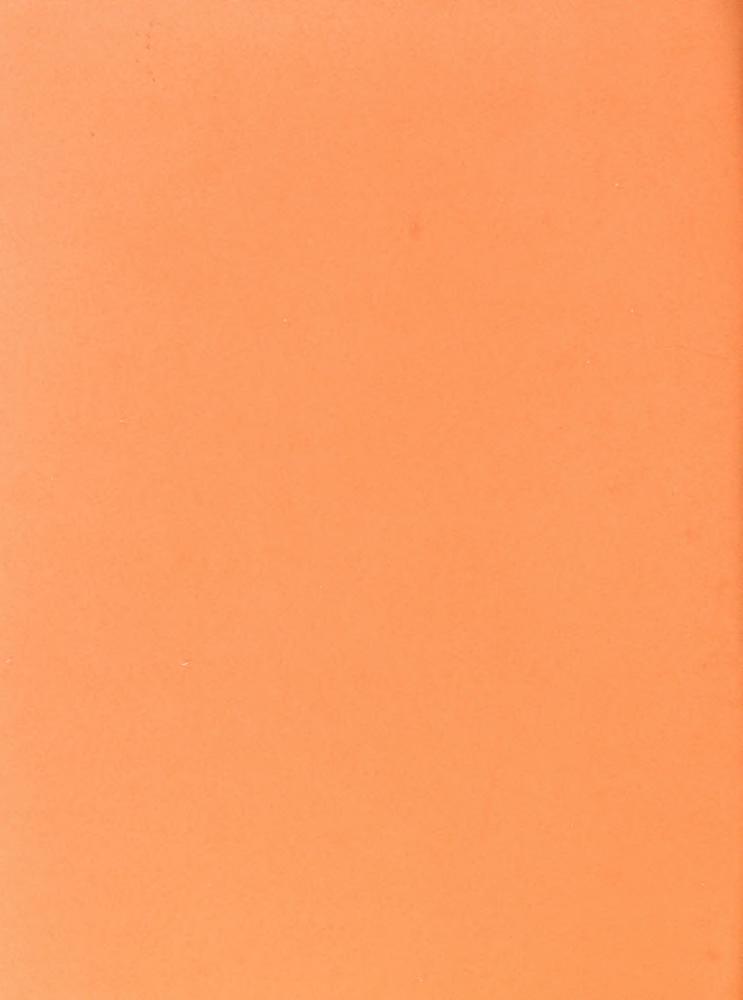
REFERENCES

- (1) U. S. Department of Health, Education and Welfare, National Cancer Institute (1972). End Results in Cancer, Report No. 4. DHEW Publication No. (NIH) 73-272, U. S. Government Printing Office, Washington, D. C.
- (2) Cutler, S. J. and F. Ederer (1958). "Maximum Utilization of the Life Table Method in Analyzing Survival," <u>Journal of Chronic Disease</u>, 8. Pergamon Press, Elmsford, N. Y., pp. 699-712.
- (3) Dixon, W. J. (1969). "BMDX76 Life Tables and Survival Rate,"

 Biomedical Computer Programs, X-series Supplement. University
 of California Press, Berkeley, California, pp. 123-141.
- (4) Ederer, F., L. M. Axtell and S. J. Cutler (1961). "The Relative Survival Rate: A Statistical Methodology," <u>National Cancer Institute Monograph No. 6</u>. U. S. Government Printing Office, Washington, D. C., pp. 101-121.
- (5) U. S. Department of Health, Education and Welfare, National Cancer Institute (1971). Preliminary Report, Third National Cancer Survey, 1969 Incidence. DHEW Publication No. (NIH) 72-128, U. S. Government Printing Office, Washington, D. C.
- (6) American Cancer Society (1972). 1973 Cancer Facts and Figures. New York, N. Y.
- (7) N. C. Department of Human Resources, Division of Health Services (1973). "North Carolina Deaths, Cause-Age-Color-Sex, 1972," Computer Printout. Raleigh, N. C.
- (8) Rubin, Philip, M.D. (1971). Clinical Oncology for Medical Students and Physicians, A Multidisciplinary Approach, Third Ed. The University of Rochester, New York.

SECTION II

TOTAL REGISTRY EXPERIENCE



1972 COMBINED HOSPITAL REPORT

The following report is a detailed summary of all the 1972 cancer cases accessed to the Central Registry from the 22 participating hospitals.

The 5,118 cases reported in 1972 represent an increase of 11.5% over the number of cases reported for 1971. This is an unduplicated number, meaning that a case seen in more than one of the reporting hospitals appears in the total only once. Consequently, the total of all the individual hospital reports will be larger than the combined hospital report.

The number of cases is indicated by primary site, race and sex, mean age, the number and percentage of cases in which diagnosis was microscopically confirmed, stage, course of treatment, and condition on discharge.

Hospital staff members wishing to compare in detail any portion of their individual hospital report with this report are encouraged to request appropriate data from the Central Registry. Requests should be channeled through the hospital's liaison physician or cancer registrar.

CASES ACCESSED TO NORTH CAROLINA CANCER REGISTRY TOTAL REGISTRY HOSPITALS, 1972

	1	!					1			
		1	DACE	4110 55	v			HISTO	LOGICAL GNOSES	
10000			KALE	ANO SE	^		1	DIA	MUSE2	
	1						MEAN	NUM-	PER-	
PRIMARY SITE	ITOTAL	I WM	NWM	WF	NWF					
	1	1					1			
The second of th	1	1	3		200					
_IOTAL_ALL_SITES	1-2118-	1 1942	289_	1993	221.	34	121.0	4639	90.6	
BUCCAL CAVITY AND PHARYNX	232	122	37	59	13	1	158.8	224	96.6	
140 LIP	1 31	1 27	1	. 3	0	0				
141 TONGUE	1 38		9	6	1	0	158.2	36	94.7	
142 SALIVARY GLAND	1 19		_	0	2	0	160.9		100.0	
142 SALIVARY GLAND 143-149_OTHER_BUGGAL	1-144-	67_	24_	42_	10				95.8	
OIGESTIVE ORGANS AND PERITONEUM	862	333	132	302	99		162 3	758	87.0	
150 ESOPHAGUS	1 84		34	302	7	o		75		
151 STOMACH	98		25	21	10	0	164.3	88	89.8	
152 SMALL INTESTINE, INCLUDING OUDDENUM		1 6	3	3	4	0	157.9	13	81.3	
153 LARGE INTESTINE, EXCEPT RECTUM	332	121	29	153	28	1	164.6	302	91.0	
154 RECTUM & RECTOSIGNOIO JUNCTION	163	1 60	17	65	19	2	165.0	146	89.6	
155 LIVER & INTRAHEPATIC BILE OUCTS	21	8								
156 GALLBLAOOER AND BILE OUCTS	1 19	6	2		1	1	161.2	16		
156 GALLBLAOOER AND BILE OUCTS 157 PANCREAS 158.159 DIHER DIGESTIVE	1 12	1 2	15		14	0	165 5	1 12	76.9	
	1						10747		-TANTA-	
RESPIRATORY SYSTEM	829		161	104	19				80.7	
161 LARYNX	1 113		25	5	2	0	159.8		95.6	
162 TRACHEA, BRONCHUS, & LUNG	1 689	1 448	131		16		160.4	537	77.9	
_160.163_DIHER_RESPIRATORY	27	112_	5_	9_	1	0_	158.5	24	88.9	
0005 0000507105 710005 0010 0 005167										
BONE, CONNECTIVE TISSUE, SKIN, & BREAST		92	12	548	116	4		748		
170 BONE 171 CONNECTIVE & OTHER SOFT TISSUE	1 18			13			49.0		95.1	
	1 115							111		
172 MELANOMA OF SKIN _174_BREASI	598			480_			57.4		97.0	
	1	1					1 1			
FEMALE GENITAL ORGANS	1 885	0	0	636	243	6	146.61	861	97.3	
180 CERVIX UTERI 182.0 CORPUS UTERI	643	0	-	426			142.3		97.0	
			-	99						
183 OVARY, FALLOPIAN TUBE, BROAD LIGAMENT 181.182.9.184 DIHER FEMALE GENITAL			0 0_		10		155.3	46	96.4	
-1911192471197-UIDER-FEMBLE-VENITAL	1 20	I		20			I DATE AT		TUULU	
MALE GENITAL ORGANS	431	275	151	0	0	5	67.7	386	89.6	
185 PROSTATE	399	249	145	0	Ö	5	69.8	354	88.7	
185 PROSTATE 186.187 OTHER MALE GENITAL	399	26	6_	0	0	0	141.81	32	100.0	
	253									
188 8LAOOER 189.0 KIONEY, EXCEPT PELVIS	156		15	28	13		63.5		96.2	
189.1.189.2.189.9 OTHER URINARY	63		6	13	10		50.5 65.3		97.1	
				A			1 1			
OTHER AND UNSPECIFIED SITES	422	207	40	144	29	2	53.0	370	87.7	
190 EYE	18	10	0	7	1	0	145.81		100.0	
191,192 BRAIN & NERVOUS SYSTEM	154		12	54	11		47.51			
193 THYROTO GLAND	31		2	21	0		42.6		96.8	
194 OTHER ENDOCRINE GLANDS	15		1	6	1		39.41		93.3	
195.199 ILL-DEFINED & UNSPECIFIED SITES	204	106_	25_	56_	16_		60.21	114_	85.3	
LYMPHATIC AND HEMATOPOIETIC TISSUE	432	221	35	149	25	2	53.1	384	88.9	
201 HODGKINS OISEASE	57		2	12	0		38.21		94.7	
203 MULTIPLE MYELOMA	56	_	10	22	7		65.21		82.1	
204-207 LEUKEMIAS	169	79	13	64	12		50.71	148	87.6	
_200.202.208.209_OIHER_LYMPHATIC	150	82_	10_	51	6_		56.81	136	_90.I_	

	STA	GE OF	DISEAS	Ε	1			TRE	ATMENT			1 1		ONDITI ON ISCHAR VE	
IN ITU	I.DC INV	REG NODES	REM MET	OIFF OIS		SUR- GERY	RAO	CHEMO	HORM	SER	COMB	NONE I	NO EVIO	NOT	DEAD
 422	2035_	_1017_	1180	375_	321	2033	827_	264	_149	364	669	8121	1907	_2763_	448
6	108	79 5	39	0	01		75	3 0	1 0	26 6	1 0	271		117	8
2	18	12	6	0	01		14	1 0	0	1	0	61	12	23	0
 4	58_	54_	28_	0	01		61_	2	l	19_		201		83_	
0	340 42	256 19	246	0	31	14	39	46 0	1	12	47	18	14	50	129 20
0	17	5	36	0	01	9	8	0	1	0	0	361 61	5	66	13
8	148 76	92 38	82 41	0	21		2 10	21	0	0	27	33		142	30 18
0	6	4	11	0	01	2	0	3	0	0	1	151	1	12	8
1 0	29	46	42	0	01		0	0 12	0	0	1 4	71 821		6 84	6 26
 <u> </u>	4_	2_	6_	0_	0T	5_	3_	2	0	0_	1_	1	3_		2
8	306	228	283	0	41		320 30	31 0	7	64	48	183		572 56	103
6	86 205	18 205	273	0	01 41		281	31	7	46	47	159	94	498	97
 00	15_	5	1_	0	01		9_	Q	0	4_	1_	5		18_	2
13	350	203	206	0	01	402	43	34	42	108	102	411		324 12	21
0	19	10	3 12	0 0	0 0	5 17	5	2	0	4	7	61		22	3
5	63 259	16 171	31 160_	0	10 101		6 28	12 16	0 42	103	8 85	22		37 253	6
 240					1							1		305	
369 356	291 165	135	90 23	0	01 01		229 184	31 6	3	48 15	52 15	641 421		189	15
6	81 20	11	15 48	0	01		23 7	2 23	2	29 3	21 15	13		44 55	2
 6	25_		4_	Q	01	25_	15_	0	0	1_	í_	4]			i_
5	282	52	92	0	1 01		5	3	60	16	168	54		257	32
5	256 26	49	89	0	01		4	3	60	8	163	521		242	32
 					ı							19		104	14
3	164 114	39 23	47 17	0	01	121	11	2	0	19 10	20	121	88	57	11
0	25 25_	14	24	0	10 10		2	1	4	8	14	5		36 11	2
 ,	194	25	177	0	1		40	36	6	46	61	110		280	66
1	12	1	4	0	25 0		1	2	0	0	2	21	10	8	0
0	133	5	15 2	0	11		7	6	2	34	27 5	25 1		106	20
0	12	1	2	0	01	5	3	0	0	3	4	01	9	5	1
 0	13_	13	154_	Q	241 	31_	29_	27	4	8_	23_	82 <u>1</u>		155_	44
0	0	0	*SEE	375 BELOW	01		38 10	76 5	22	25 12	170	73 l 5 l		355 47	60
0	0	0	0	56	01	0	6	5	5	0	32	81	0	50	6
 0	0 <u>0</u>	0 Q_	0 0_	169 150	10 10		1 21	53 13	15	0 13_	61 58_	37 23	11_	133 125	36
CASE	TOTA S OF	L STAG	E OF O	ISEASE,	8REA	KDOWN	OOES N	OT INCL ACCORD		STA 1 2		UMBER 6 3	STAG 6 7		M8ER 7 3
10 0	LINIC	AL CLA	SSIFIC	ATION.						3		7	8 UNK		13
										5		5			

THE RESERVE AND PERSONS NAMED IN COLUMN 2 ADDRESS.

1968-1972 COMBINED HOSPITAL REPORT

The following report represents in detail a summary of all the cases accessed to the Central Cancer Registry from its beginning in 1968 up to and including 1972.

The number of cases is indicated by primary site, race and sex, mean age, the number and percentage of cases in which diagnosis was microscopically confirmed, stage, course of treatment, and condition on discharge.

Hospital staff members interested in any details of the total cancer cases on file with the Central Registry to, for instance, compare to national statistics or to local hospital cumulative totals are urged to make requests to the Central Registry through the participating hospital's liaison physician or cancer registrar.

CASES ACCESSED TO NORTH CAROLINA CANCER REGISTRY TOTAL REGISTRY HOSPITALS, 1968 - 1972

THOUGH AND			RACE	ANO SE	x			HISTOL		
	TOTAL	wm	NWM	WF	NWF			NUM- 8ER		
_IOIAL_ALL_SIIES	L22346_	8834	_257B_	8312	2532				88.7	
SUCCAL CAVITY AND PHARYNX	1155	637	163	299	54		159.7	1117	96.7	
140 LIP	111	96	2	10	3	0	158.4	108	97.3	
	195		32					186		
142 SALIVARY GLAND 143-149 OTHER BUCCAL	107		14	199	13			717	-	
									-4848	
	3549		546	1204				3074		
	359	and the second second	114	62	32		159.9		88.3	
131 310114011	432		118	87			163.8	56	86.8	
153 LARGE INTESTINE, EXCEPT RECTUM			122	555	144			1160		
	651		71	238	60			598		
	101		24	23	12			79		
156 GALLBLAODER AND BILE OUCTS	103	31	8					93		
156 GALLBLAODER AND BILE OUCTS 157 PANCREAS 158.159 DIHER DIGESILYE	1 491	201	79		61			348		
				bH-			1			-
	3548		628					2836		
	445		75					429		
162 TRACHEA, BRONCHUS, & LUNG 160:163 DIHER RESPIRATORY	1 2958	76	521 32	334				2278		
BONE, CONNECTIVE TISSUE, SKIN, & BREAST	3033			2119			-	2811		
170 80NE	154							141	91.6	
	195 450		20		19			191		
172 MELANOMA OF SKIN 174 BREASI	2234	21	5					2053		
							1			
FEMALE GENITAL ORGANS 180 CERVIX UTERI 182.0 CORPUS UTERI	3758	0						3605		
180 CERVIX UTERI 182.0 CORPUS UTERI	2594	0	_	1587 459	998 79			2495		
183 OVARY, FALLOPIAN TUBE, BROAD LIGAMENT	395	0			52			364		
181.182.9.184 OTHER FEMALE GENTIAL				182				223		_
							1			
MALE GENITAL ORGANS 185 PROSTATE	1864	1351	673	0				1776		
	173							169		
URINARY ORGANS										
188 8LAOOER 189.0 KIONEY, EXCEPT PELVIS	658		52 29	137 85	41 35		164.7		92 .9 79 . 9	
189.1.189.2.189.9 OTHER URINARY	131		9_	33_	1		162.4			
	1									
OTHER AND UNSPECIFIED SITES	2082		211	755	177			1817	87.3	
190 EYE 191,192 BRAIN & NERVOUS SYSTEM	85 771		5 62	36 289	47		41.7		95.3 87.8	
193 THYROIO GLANO	176		7	105	22	_	44.4		96.0	
194 OTHER ENOUCRINE GLANOS	93	42	11	29	10	1	142.3	80	86.0	
_195.199_ILL-DEFINED_&_UNSPECIFIED_SITES	957	436_	126_	296	94		159.6	810	84.6	
LYMPHATIC AND HEMATOPOIETIC TISSUE	2072	987	210	722	143		152.0	1799	86.8	
201 HOOGKINS OISEASE	364		40	113	24		41.5		92.3	
203 MULTIPLE MYELOMA	279		58	78	38		63.8		81.4	
204-207 LEUKEMIAS	734		69	254	41		149.8		84.2	
_200.202.208.209_DIHER_LYMPHAIIC	L_695	332_	43_	277_	40	3	125.2	618	_88*3	

 	STA	GE OF	DISEAS	E				TRE	ATMENT			 		ONDITI ON ISCHAR VE	
IN SITU	LOC	REG NODES	REM	DIFF		SUR- GERY	RAD	CHEMO	HORM	SER	OTH COMB	NONE I	NO EVID	NOT	DEAD
 1346	10418_	_3787	4494_	_1708_	.229	_8307_	_3562_	_1302	_559	1475_	_2875_	4266 <u>1</u>	_1552_	12645_	_2149
19	728	306	94	0	8 1		336	10	1	117	31	166	533	568	54
6	85 124	14	12	0	2		2 56	0	0	7 17	2	61 381		20 100	11
0	66	26	14	0	11		272	2	0	13 80_	1 21	61	294	39 409_	2
 9_	453_	212_	64_	Ω	4]	246_	212_			ov_		1			
51	1597 216	915 78	965 62	0	211	1718 52	277 150	197	12	84	187	1074	1122	1841	586 71
2	127	171	128	0	21	185	27	27	2	6	16	1691	88	269	75
0	34 622	15 330	14 313	0	0		2 11	66	1	3	2 88	2101	604	29 553	15 140
24 19	332	148	150	0	2 1		45	28	i	19	35	1181	311	273	67
0	46	12	41	0	21		1 4	13	0	0	4	761 401		54 48	32
1	50 149	26 127	26 210	0	41		26	46	4	1	22	334	13	345	133
 0_	21_	8	21_	Q	2]	15_	11_	8		4_	3_	101	8_	35_	9
31	1596	961	920	0	40	737	1293	129	17	270	237	865		2382	481
23	326 1178	83 856	13 882	0	0 I 35 I		137	123	0 17	74 181	211	801 7561		217	13 452
 i_	92_	22	25_	<u>0</u> _	5		38_	4	0	15	19_	291		97_	16
54	1441	802	730	0	61	1630	195	134	119	329	373	2531	1641	1280	112
0	110	16	28	0	01	58	25	9	1	15	18	281	60	86	8
0	130	25 72	39 121	0	11		17 10	9 37	1	15	21 39	201 531		89 169	15
 40_	959	689	542	<u>o</u> _		_1152_	143_	19	_116_	_291_	295_		1215	936_	83
1156	1851	351	377	0	23	1649	988	117	10	208	205	581	1875	1795	88
1117	1131	228	107	0	111		752	18	2	65	47	4321		1174 258	39 12
16	431	38 52	53 192	0	8		148 35	5 87	1	100 37	50 89	491		259	28
 21_	148_	33_	25_	Q_	1	1108_	53_	1	1_	6_	19_	341	115_	104_	9
15	1397	197	412	0	16	596	42	25	288	67	775	2441		1263	150
13	1286	173	376 36	0	16		27 15	17	288	29 38	753 22_	2281		1185	145
 		23	20_		1							1			
15 13	789 527	115 70	188	0	51		68	8 2	10	113	94 30	139 64		489 278	74 38
1	171	28	118	Ö	5	147	16	5	9	35	52	591	128	167	28
 	91_	17_	22_	Q_	0	188_	8_	1	0	6-	12_	161		44_	8
5	1019	140	808	0	110		189	155	34	204	283	520	429	1322	331
2	68 703	3 12	10	0	2		3 52	13	0	133	7 105	110		33 461	0 121
1	113	44	17	0	1	118	3	1	3	8	31	121	117	55	4
0	78 57_	2 19_	13 	0 0	0 28		13	3 134	5 19	6 48_	32 108_	91 <u>382</u>		129_	200
 					1		174		68	83	690	4241		1705	273
0	0	0	*SEE	1708 8ELOW	0	106	47	527 61	3	38	125	581	27	309	28
0	0	0	0	279	0		22	67	13	6	123	421		229 589	41 140
 0	0 0	0	0	734 695	0		8 97	274 125	39 13	39_	217_	1401	53_	578_	64
AT.	E TOTA	L STAC	E DE C		905	KUUMN	DUE C .	OT INCL	HDE	STA	GE N	UM8ER 24	STAG	E NU	M8ER 38
CAS	ES OF	HODGK1	N'S DI	SEASE.	WH1	H ARE	STAGEO	ACCORD	ING	2		8	7		11
10	CLINIC	AL CLA	SSIFIC	ATION.						3		32 11	UNK 8		61 53
										5		26	5111	•	





